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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/298,268	04/23/99	CHISHTI M	18563-000130

020350 QM32/0606
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EXAMINER	
WILSON, J	
ART UNIT	**PAPER NUMBER**
3732	3

DATE MAILED: 06/06/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
09/298,268	Chishti et al.
Examiner	**Group Art Unit**
John J. Wilson	3732

☒ Responsive to communication(s) filed on *Apr 23, 1999*

☐ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *THREE* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) *19-44* is/are pending in the applicat

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *19-44* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). *2*

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

DETAILED ACTION

The pre amendment filed with this application canceled claims 1-19, however, it is clear from the parent application that this is in error and that applicant intended to cancel claims 1-18. The examiner has changed the amendment to cancel claims 1-18 only. Claims 19-44 remain in this application and an action on the merits of these claims follows.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 22 and 25-28 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. These claims are directed to using a computer to merely do calculations. There are no steps other than gathering data, manipulating data and/or displaying data. As such, these claims are non-statutory.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle et al. Doyle teaches moving and displaying teeth, column 13, lines 20-25. The image is manipulated by virtue of the teeth being moved. That a final digital data set can be produced is an obvious matter of choice in the use of the data that is gathered while moving the teeth to one of ordinary skill in the art. The use of boundary points is well known and held to be an obvious matter of choice in image manipulation to one of ordinary skill in the art.

Claims 22, 23, 25-30 and 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andreiko et al (243). Andreiko shows a computer method including receiving initial data and generating final positions through calculations and teaches calculating in several steps of movements, column 25, lines 38-67 and column 26, lines 1-55. These calculations inherently provide a set of intermediate positions. That this data can be provided as sets of intermediate data is an obvious matter of choice in the organization of known data to one of ordinary skill in the art. As to claim 23, see the Abstract, line 4. As to claim 25, the specific calculations used are an obvious matter of choice in calculations to the skilled artisan. As to claim 29, Andreiko teaches producing appliances.

Claims 24 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andreiko et al (243) as applied to claim 1 above, and further in view of Doyle et al. Andreiko teaches defining different features such as contact points, cusp tips and others for the purpose of

calculating tooth movement and also teaches using boundaries, column 15, lines 56-69. Andreiko does not show moving these features relative to other teeth in an image. Doyle teaches displaying moved teeth, column 13, lines 20-25. It would be obvious to one of ordinary skill in the art to modify Andreiko to include displaying moved teeth as shown by Doyle in order to better see the results of moving the teeth.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 22-38 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-140 of copending Application No. 09/169,276. Although the conflicting claims are not identical, they are not patentably distinct from each other because the specific calculations used is an obvious matter of choice in calculations to one of ordinary skill in the art.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 39-44 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-55 of copending Application No. 09/311,715. Although the conflicting claims are not identical, they are not patentably distinct from each other because to use a fabrication machine to form the appliance is an obvious matter of choice in well known production steps to one of ordinary skill in the art.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

Claims 36-44 stand rejected under Double Patenting only.

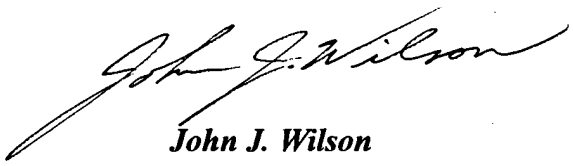
Drawings

The drawings filed April 23, 1999 have been approved.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Loran et al shows forming a model and making a tooth on the positive model.

Any inquiry concerning this communication should be directed to John Wilson at telephone number (703) 308-2699.



John J. Wilson
Primary Examiner
Art Unit 3732

jjw
June 2, 2000
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